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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,508	10/18/2001	Masaou Matsuda	358362010400	5230

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EXAMINER
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BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/889,508

Applicant(s)

MATSUDA ET AL.

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed September 26, 2003, have been entered and have been carefully considered. Claims 1 and 8 – 10 are amended, claim 5 is cancelled and claims 1 – 4 and 6 – 11 are pending. In view of Applicant's Amendments, the Examiner withdraws the Objection to the Abstract and the 35 U.S.C. 112, 2<sup>nd</sup> paragraph rejection of claims 7 and 8 – 10 as set forth in paragraphs 5 and 6 of the previous Office Action dated June 26, 2003. In view of the Applicant's Arguments, the Examiner withdraws the 35 U.S.C. 103(a) rejection of claim 7 as being unpatentable over Endo (US 4,157,436) in view of Siegrist et al. (US 4,008,224) as set forth in paragraph 9 of the previous Office Action dated June 26, 2003. However, after an updated search, the invention as currently claimed is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

3. Claims 1 - 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The details of the rejection can be found in paragraph 4 of the previous Office Action dated June 26, 2003. The rejection is maintained.

***Claim Rejections - 35 USC § 102/103***

4. Claims 1 – 4, 6 and 8 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Endo (US 4,157,436). The details of the rejection can be found in paragraph 8 of the previous Office Action dated June 26, 2003. The rejection is maintained.

The Applicant has amended claim 1 to include the limitation “wherein the flame-retardant polyester fiber has a shrinkage in hot water (SHW) of not more than 10%”. The new limitation of claim 1 was previously the contents of claim 5 which was previously rejected by Endo and now cancelled. Therefore, the Examiner maintains the same rejection.

***Claim Rejections - 35 USC § 103***

5. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buxbaum (US 4,101,526).

Buxbaum is directed to a process for manufacturing a linear polyester containing phosphates suitable for use in the form of a filament (Abstract and column 7, lines 50 – 60). Buxbaum teaches that metal compound mixtures comprising cobalt, germanium and antimony can be employed in the polyester in the amount of 0.001 to 1% by weight (column 6, lines 14 – 20). Buxbaum teaches that other additives can be included such as fluorescent whitening agents (column 7, lines 5 – 15).

Buxbaum discloses the claimed invention except for the level of fluorescent brightener present in the polymer is 0.01 – 1% by weight and that the amount of

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antimony, germanium and cobalt compounds satisfy the following equations:  $30 \leq S \leq 400$ ,  $10 \leq G \leq 100$ ,  $5 \leq C \leq 40$  and  $200 \leq S + 2G + C \leq 400$ . It should be noted that the amount of fluorescent brightener, antimony, germanium and cobalt compounds are result effective variables. For example, as the amount of brightener increases, the polymer becomes whiter and brighter. When the amount of the antimony compound added is less than the aforementioned range, the condensation polymerization becomes slow, and when it exceeds the above-mentioned range, the L value as measured with a Hunter's color-difference meter unpreferably decreases. When the amount added of the germanium compound is less than the above-mentioned range, the condensation polymerization becomes slow, and when it exceeds the above-mentioned range, the production cost becomes higher because germanium is extremely expensive, and the b value of the polymer unpreferably increases. When the amount added of the cobalt compound is less than the above-mentioned range, the b value of the color tone of the resulting polymer becomes high. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the fluorescent brightener in the amount of 0.01 – 1% by weight since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of optical brightener to create a suitably white polyester and to optimize the levels of antimony, germanium and cobalt to create a cost efficient, properly tinted polyester which is polymerized in an efficient manner.

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6. Claims 9 – 11 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US 4,157,436) in view of Vogt (US 5,952,413). The details of the rejection can be found in paragraph 10 of the previous Office Action dated June 26, 2003. The rejection is maintained.

### ***Response to Arguments***

7. Applicant's arguments filed September 26, 2003 with respect to the rejection(s) of claim 7 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

8. Applicant's arguments filed September 26, 2003 in regards to claims 1 – 4, 6, and 8 - 11 have been fully considered but they are not persuasive.

9. In response to Applicant's Argument that *Ex Parte Slob* is not applicable, the Examiner respectfully argues the contrary. The Examiner recognizes that the Applicant has set forth the material limitation "a polyester fiber comprising a phosphorus compound copolymerized polyester". However, the Applicant has indicated that the property limitations of the instant invention are not inherent to the polyester fiber of the prior art. Therefore, the Examiner believes that "a polyester fiber comprising a phosphorus compound copolymerized polyester" is not a very specific chemical limitation if prior art can meet the material limitations without meeting the property limitations simultaneously.

10. In response to Applicant's Argument that the properties are not inherent, the Examiner respectfully argues the contrary. The material limitations of "a phosphorus compound copolymerized polyester having a phosphorus content of 500 – 50,000" as

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required in claim 1 have been met and therefore it is asserted that the claimed properties must be inherent to the fiber. The Applicant argues that the properties are not inherent, therefore, the Examiner has concluded that crucial details that distinguish the instant invention from the prior art have been omitted from the claims. First, the Examiner agrees that the properties as required in claim 1 are associated with a polyester *fiber*. In Example 10 of Endo, a flame retardant polyester *fiber* is manufactured which is governed by the general formula found in the Abstract of Endo. Although Endo does not describe that *every* embodiment can be spun into filaments and yarns and knitted, one embodiment *does* meet the limitations set forth by the Applicant. Therefore, Endo clearly anticipates the material requirement of "a *fiber* comprising a phosphorus compound copolymerized polyester having a phosphorus content of 500 – 50,000" lacking only the recitation of properties. Given that the applied art desires and is designed to function as Applicant's intend their invention to function in all comparable aspects, including the same utility, one can only conclude that the art inherently possesses these properties absent some evidence or showing that such a conclusion does not follow from the facts of record. Even though the material limitations of the Applicant have been met, the Applicant disagrees that the properties are inherent. If they are not inherent, it is asserted that Applicant's claim must be incomplete. The Examiner believes that passing to issue such claims that appear to be encompassed by the prior art are unclear as to what would infringe, would be a grievous error on the part of the Office.

11. In response to Applicant's Argument that the references fail to show certain features of Applicant's invention, it is noted that the features upon which applicant relies (i.e., take-up speed, draw ratio and setting temperature) are not recited in the rejected

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claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Applicant notes that the polyester fiber of Endo in Examples 10 and 11 are different from those of the present invention. The Applicant indicates that the take-up speed of Endo is lower, the fiber of Endo has a higher draw ratio and the setting temperature of Endo is lower than the desired range of the Applicant. It should be noted that, although these differences do exist between the invention of the Applicant and Endo, the take-up speed, draw ratio and setting temperature among other manufacturing parameters are NOT found in the Applicant's claim limitations. If these manufacturing parameters are crucial to the properties of the polyester fiber, it is suggested to the Applicant to amend the claims to include such limitations.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0994.



Jennifer Boyd  
December 15, 2003



TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700